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CONSIDERATIONS ON FOOD INSPECTION IN DEVELOPING COUNTRIES

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INTRODUCTION

1) When instituting food inspection in a developing country, especially where there is a tropical climate, it is essential to view the infections transmitted by foodstuffs at the execution of the control of these foodstuffs. The next point would be the adulteration of the main foods being injurious to health (i.e. mineral oil for edible oil). Besides that, it is important to note the food-poisonings by cereal fungi like ergot of rye and maize smut which had been of importance in Europe, as is well known, until last century. Only in the third place it seems to be important to prevent the serious adulterations of foodstuffs being injurious to health - as they have been observed also in Europe in previous centuries - especially in developing trades. Finally, the last stage of the establishment of a control of foodstuffs would be the examination of foodstuffs for unsoundness and certain characteristics of quality, as carried out in the European countries.

2) The legal bases for food inspection in developing countries: in order to carry out the specified analyses, it is necessary to establish and to realize a corresponding law on foodstuffs. Unlike the Austrian law on foodstuffs, such a law should clearly cover all the measures of control and should also specify all the methods in a book of methods in order to prevent a superficial and irrelevant procedure of control. That is to say that, corresponding to the classification of the World Health Organisation for the infections communicable by foodstuffs, there should be established a basis for the examination and also a basis for the control similar to the Austrian law concerning communicable diseases and the law regulating periodic investigations for enteric pathogens in persons dealing with victuals in particular. Such a law should include the infections communicable by foodstuffs. These are :

a) communicable diseases:

i) bacterial infections: typhoid fever, paratyphoid fever, infections with salmonella, dysentery, streptococcal sore throat and streptococcal scarlatina, diphtheria, brucellosis, tuberculosis and tularaemia.

ii) Viral and rickettsial infections.

iii) Protozoal diseases.

iv) Zoonoses.

The infections mentioned under a) i and ii might fall within the scope of a general control of health and in this way it would not be necessary to deal with them in the control of foodstuffs: streptococcal sore throat and streptococcal scarlatina, diphtheria and tuberculosis, viral and rickettsial infections. A law on foodstuffs, therefore, should comprise the following diseases: typhoid fever, paratyphoid fever, salmonelloses, dysentery, brucellosis and tularaemia, protozoal diseases, zoonoses, botulism, food-poisoning by staphylococcal enterotoxin.

3) For the control of the diseases communicable by foodstuffs, it would be necessary to establish on the basis of the law a police-organisation for foodstuffs which should be entitled to take samples and also to take samples of water in all enterprises producing foodstuffs and in all groceries, as determined by the Austrian law on foodstuffs. These police-organs for foodstuffs should be defended against attack as they might occur in less enlightened classes of population. That means, that they should have real police-power with all rights resulting from them, similar to the police-organs for foodstuffs in the Netherlands. Regarding an efficient combat against infections, they should also have the right to control not only the foodstuff industries as provided by the Austrian law on foodstuffs, but also foodstuff-production on farms, etc. It would be suitable to give the functions of sanitary police also to these police-organs and to charge them with the control of drinking water.

4) Besides the right to take samples, the law on foodstuffs should include also the right of sanctions. These sanctions should be divided into delicts of negligence and deliberate delicts providing the possibility of warnings to be given by the police-organs for foodstuffs or their superior authority as an instructive measure.

5) Besides that, the law on foodstuffs should contain the institutions for the analyses of foodstuffs. Later this point will be discussed in detail.

6) <u>Emergency programme for the establishment of a control of foodstuffs</u>: within the frame of an emergency programme, there should be established institutions for analyses. At first, one institution would be sufficient for a population of 3 - 4 millions. Above all, such an institution should have bacteriological equipment for the analyses of foodstuffs and a bacteriological specialist should be engaged to deal with food-bacteriology and food-epidemiology respectively. In the second place only, it would be necessary to employ chemists. The reason for this kind of equipment of these institutions for analyses is the importance of this activity in order to prevent epidemic diseases communicable by foodstuffs. Chemical analyses of foods will not be of such a comprehensive significance, except i.e. cornutism, ustilaginism, mineral oil to edible oil, etc. For the bacteriological analysis of foods, it would be necessary to engage food-bacteriologists trained abroad and two physicians; one of them should be the director of the institute for analyses. 6 qualified medico-technical lady-assistants specially trained in food-bacteriology should be at the disposal of these two physicians. For the chemical analyses of foodstuffs it would be sufficient to engage one or two food-chemists with three or four medico-technical lady assistants

7) As for the equipment with appliances of an institute of this kind the need of them would prove itself automatically by the volume of analytic problems to be carried outin the field of bacteriology. For the execution of chemical tests it will be sufficient to provide for standard equipment, whereas there will be no need of special instruments, such as spectrophotometers, gaschromatographs, etc.

8) In the first place, the chemical tests of the institute should cover especially the chemical analyses of water; besides that, the analyses of adulteration of main foodstuffs, such as chemical control and control of weight of bread and corn, the analyses of milk and milk-products for dilution and skimming, analysis of fat and particularly of oils for the

addition of deleterious substances as mineral oils, etc. As for the examination of fruit and vegetables, it would be necessary to provide a microbiological control for contamination of vegetables by metazoic parasites causing diseases in man.

9) At any rate, the food-police should be subordinated to the control of the institute for analyses as practised in the Netherlands. The director of this institute should be, therefore, also chief of the food-police. By these means only, it would be possible to carry out a suitable and independant food-stuffs control and prevent diseases communicable by foods. Therefore, it would be indispensable that the foodstuffs-control should be independant of local influences and it should be subordinated directly to the control of the government of the country. The chief of the foodstuffs-control should be vested with extraordinary powers regarding his actions and in case of need, he should be authorised to call on the executive power for assistance.

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